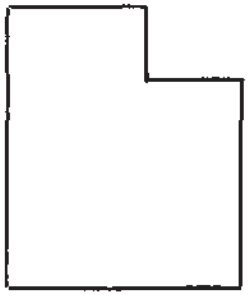

UTAH DIVISION OF ENVIRONMENTAL RESPONSE AND REMEDIATION

ANALYTICAL RESULTS REPORT

RAHKONEN DRUM SITE
BRIGHAM CITY, UTAH
UTD98154598

~~Draft~~ August 22, 1991

FINAL 9/9/91 L.C.

ANALYTICAL RESULTS REPORT

RAHKONEN DRUM SITE

Brigham City, Utah
UTD98154598

Utah Division of Environmental Response and Remediation
Prepared by: Terry Hawkins

Draft August 22, 1991

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1.0 INTRODUCTION

This report has been prepared to provide the analytical results data collected from the Site Inspection (SI) sampling conducted on March 27, 1991 at the Rahkonen Drum Site (RDS), Brigham City, Utah. Previous reports including the Preliminary Assessment, Sampling Plan, Field Activities Report, and EPA Site Inspection Form (Appendix I) provide detailed information on site description, background, project objectives, sampling rationale, and sampling procedures.

2.0 BACKGROUND

The RDS is located at 112 South 800 West in Brigham City, Utah (see Figure 1). The property is jointly owned by Arnold Thompson and John Peterson. The owners lease space to Mr. John Rahkonen for the storage of his drums.

The property is approximately 8 acres in area, most of which are open fields and old buildings that were once used in a cannery business (thought to be in operation in 1946). Among the activities currently operating at the RDS are: drum storage, storage of material used in a brine shrimp operation, and a welding shop. Box Elder High School is located approximately 100 yards east of the property and an adjacent railroad is 50 yards to the west.

Allegedly, during operation of the cannery, fuel was spilled on the ground, which formed the "tar pit". The owner has since removed the "tar pit" to the county landfill. The soil surrounding the "tar pit" has been disked.

On October 21, 1987, a Preliminary Assessment (PA) for the site, prepared by Michael Long of UBSHW, was finalized. The EPA believed No Further Action was necessary, but recommended involvement of the Emergency Response Branch of EPA, if the drums were not removed from the site. Because the drums are currently stored on-site the need for further action became evident.

On January 18, 1990, the EPA Emergency Response Branch and EPA's Technical Assistant Team (TAT) sampled the drum contents and inspected the site. The TAT collected product samples from 12 drums. The analyses of these samples indicate that elevated levels of arsenic, barium, chromium, lead, and silver may be associated with the drum contents. The analysis also indicated the possibility of carcinogens associated with the drum contents In a letter from Michael Holmes of the Emergency Response Branch (ERB) of the EPA to John Rahkonen, Mr. Holmes indicated that the results to the analysis did not warrant further action by EPA's Removal Program, but recommended that steps be taken to reduce the fire hazard at RDS.

3.0 SITE CONDITIONS

3.1 Geology

The RDS is located on an alluvial fan west of the Wasatch Mountains. The site is part of the Lower Bear River Drainage Basin. The alluvial and delta deposits in Brigham City contain several hundred feet of saturated, highly permeable gravel and sand (Bjorlund and McGreevy, 1974). Fine grained sands and gravel were encountered during the drilling of the monitoring wells at the RDS (RDS Field Activities Report, 1991). The topography of the site slopes to the northwest and drops approximately 20 feet in elevation.

3.2 Groundwater

Regional groundwater in the Lower Bear River Drainage Basin occurs in a principal groundwater system under both confined and unconfined conditions. The average annual change in groundwater storage is small; thus, total recharge to discharge from the groundwater is approximately equal (Bjorklund and McGreevy, 1974).

Groundwater levels and physical parameters were measured at various times and are located in Table 1. Groundwater flow directions from these elevations indicate that flow direction can vary from northeast to southwest. A groundwater contour map was developed from the May 21, 1991 data (see Figure 2).

3.3 Surface Water

The closest surface water body is a man-made pond located two blocks northeast of the site. Surface water within four miles of the site is not used for potable purposes, but is used for irrigation, a source of water for indigenous fauna, and for recreation purposes. Box Elder Creek is located approximately 1 mile northeast of the site. The Bear River is located about 6 miles west of the RDS. There are wetlands located west of the site, including the Bear River Migratory Bird Refuge which is about 2 miles west-southwest of the RDS. At the time of the site visit, surface water from the "deep" irrigation well flowed from the well into a small ditch that emptied into the ditch along the railroad track.

4.0 SAMPLE COLLECTION

Sampling activities for the SI were conducted on March 27, 1991 (see Figure 3, for sampling locations). Three monitoring wells were sampled including 1 background (RD-MW-01) and 2 downgradient (RD-MW-02 and RD-MW-03) wells. Before sampling, the depth to the groundwater was measured and at least 3 casings volumes of water was purged from each of the 3 wells and physical parameters of the groundwater were measured (see Table 1) as outlined in the Sampling Plan. The conductivity meter was not operating properly, so no conductivity readings were recorded. The monitoring wells recharged rapidly which provided efficient sampling. Headspace in each well was

monitored for organic vapors with an Hnu prior to purging the wells. All of the wells showed a background reading of 0.

The groundwater samples collected for the analysis of organic compounds were poured directly from separate decontaminated teflon bailers into the appropriate sampling containers (2 VOA vials and 2 half-gallon amber bottles). Groundwater collected for the analysis of inorganic compounds was poured from the decontaminated teflon bailer into a decontaminated stainless-steel bucket. This groundwater was pumped through a .45 micron filter with a peristaltic pump into 1-liter plastic bottles preserved with 2 ml of 1:1 HNO_3.

An opportunity surface water sample (RD-SW-03) was collected from a small ditch emanating from the "deep" irrigation well on site. It appears that the water is flowing from the irrigation well by artesian pressure. The sample was collected directly into the appropriate sample containers.

Fourteen soil samples were collected from 7 locations at the RDS. Two samples were collected from each location, 1 sample was collected at 0-2 inches in depth and the other sample was taken at 6-12 inches in depth. Each of the soil samples were collected with a separate decontaminated stainless-steel spoon and put directly into the appropriate sample containers.

An opportunity sediment sample was taken from the same location as the opportunity surface water sample. This sample was taken with a decontaminated stainless-steel spoon and put into the appropriate sample containers.

5.0 ANALYTICAL RESULTS

Analytical results for the 3 groundwater samples, 14 soil samples, 1 surface water sample, and 1 sediment sample collected at RDS are summarized in Tables 2-5. Sample locations corresponding to the data is located in Figure 3. All samples were analyzed for Target Compound List analytes including volatiles, base-neutral/acid extractables, pesticides, PCBs and for Task 1 and 2 metals.

5.1 Groundwater Samples

5.1.1 Organic Results

The organic data summarized in Table 2 indicates the presence of 3 VOA compounds and 1 BNA compound. All 3 VOA compounds (1,2 Dichloroethene (total), Trichloroethene, and Tetrachloroethene) were detected in the downgradient monitoring wells. Trichloroethene was also detected in the surface water sample. Trichloroethene was detected above the Maximum Contaminant Level (MCL) of Drinking Water Standards of 5 ppb at 1800 ppb in the downgradient monitoring well RD-MW-02. An unknown BNA compound and 9-

Hexadecanoic Acid was tentatively detected in the background monitoring well. A BNA (bis(2-Ethylhexyl) Phthalate) was tentatively detected in the downgradient monitoring well RD-MW-03. There were no pesticides detected in the groundwater.

5.1.2 Inorganic Results

Arsenic was detected in the background well RD-MW-01 at 113 ppb (see Table 3). The MCL for Arsenic (50 parts per billion (ppb) of the Drinking Water Standards (40 CFR, Part 141).

5.2 Soil Samples

5.2.1 Organic Results

Table 5 indicates the presence of 21 BNA compounds in the soil samples. The highest BNA concentrations ranged from 83 parts per billion to (ppb) to 5300 ppb. The analytical results for sample locations RD-SO-07 and RD-SO-07D were not received. Several unknowns, naphthalenes, and other BNA compounds have been tentatively identified (See Appendix 2).

The only VOA compound detected in the soil samples was Acetone (see Table 6). The highest concentration of Acetone was detected at RD-SO-04D at 29 ppb. Acetone is a common laboratory contaminant and it was detected in the laboratory blank at 20 ppb.

Table 6 indicates the presence of 13 pesticides in the soil samples. The highest concentrations ranged from 2.3 to 21,000 ppb.

5.2.2 Inorganic Results

The background sample analyses were higher in concentration for chromium, lead, magnesium, manganese, and mercury than the downgradient soil samples. Chromium at 68.2 ppm was found to be more than 5 times higher in concentration, than any downgradient soil sample. Sodium is up to 20 times greater in concentration in dowgngradient soil samples, than background soil samples. The source of the inorganic contamination in the background well has not been determined.

5.3 Surface Water Sample

5.3.1 Organic Results

Table 2 indicates that the only organic compound detected in the surface water RD-SW-03 is Trichloroethene at 24 ppb. This concentration is above the MCL of Drinking Water Standards of 5 ppb.

5.3.2 Inorganic Results

Iron was detected above the recommended concentration limit of 300 ppb at 542 ppb (see Table 4).

5.4 Sediment Sample

5.4.1 Organic Results

Table 5 indicates the presence of 2 BNA compound at RD-SE-01, 590 ppb of 4-Methylphenol and 330 ppb of bis(2-Ethylhexyl) phthalate. Table 6 indicates the presence of 2 pesticides and 1 VOA compound at RD-SE-01, 7.3 ppb of 4,4'-DDE, 11 ppb of 4,4'-DDT, and 15 ppb of Acetone.

5.4.2 Inorganic Results

Arsenic was detected in the sediment sample at a concentration higher than any soil sample at 9.4 parts per million (ppm) (see Table 4).

5.5 Quality Assurance

The organic and inorganic data packages were examined thoroughly by the quality assurance officer for compliance with EPA functional guidelines for reviewing organic and inorganic compounds. The quality assurance reports and data sheets are provided in Appendix II. These data packages were judged acceptable with the following qualifications.

5.5.1 Organic Data

All VOA contract holding times were met for soil and water samples. However Regulatory holding times (40 CFR 136) were violated for the water samples for pesticides and volatiles by 1 day. The Regulatory holding times (40 CFR 136) were met for soil samples. The associated results were flagged "J" (estimated due to possible low bias).

Instrument calibration for Acetone, 2-Butanone, Vinyl Acetate, 1,2-Dichloropropane, 1,1,2-Trichloropropane, Trans 1,3-Dichloropropene, 4-methyl-1,2-Pentanone, and 2-Hexonone were outside the control limits for volatiles in soil. Instrument calibration for Methylene Chloride, Dichloropropane, Vinyl Acetate, 1,1,2-Trichloroethane, 2-Hexanone, Ethyl Benzene, and total Xylenes were below the control limits for volatiles in water. Instrument calibration for semivolitile compounds were within control limits for water. However, the percent difference for various semivolitile compounds were outside the control limits. The relative response factor for 3-Nitroanaline was outside the control limit for semivolatiles in soil.

Volatile surrogate recovery for sample HH803 was slightly higher than the contract requirement. Semivolitile surrogate recoveries (soil) for HH803 and HH804 were below the contract required limit. Surrogate recoveries for samples HH810 and HH821 were outside the control limit for pesticides. Four out of 10 spike recoveries for volatile compounds were outside the control limits. Volatile compound internal standards results for samples HH809, HH810, HH817, and HH821 were outside the control limits.. The breakdown of 4,4'DDT and Endrin was less than 20% in water and soil samples. The pesticide linearity criteria for DDT was not met for soils. The retention of time of 4,4'-DDT was greater than 12 minutes for all compounds for soil samples. Only Acetone was detected as a volatile in the soil samples which was also detected in the VOA lab blank at 20 ppb.

5.5.2 Inorganic Data

The holding times were met with 40 CFR 136 and CLP requirements. Instrument calibration was within contract limits. Contaminants in blanks were not found above detection limits. Overall data quality appears to be good.

6.0 EXPOSURE PATHWAYS

6.1 Groundwater

Groundwater sampling results indicates a release of 3 volatile organic compounds, 1 BNA compound, and 1 inorganic compound to the groundwater. They are 1,2 Dichloroethene (total) (10 ppb), Trichloroethene (1800 ppb), Tetrachloroethene (210 ppb), (2-Ethylhexyl) Phthalate and lead (1.1 ppb). Trichloroethene detected at 1800 ppb in RD-MW-02 is above the MCL for Trichloroethene of 5 ppb. The inorganic analyses indicates that inorganic concentrations are generally higher in the background monitoring well. Arsenic was detected in the background monitoring well, above the MCL of 50 ppb, at 113 ppb. Manganese was detected in the background monitoring well and the downgradient monitoring well MW-3 above the recommended concentration limit of 50 ppb, at 69 ppb and 71 ppb respectively. An unknown BNA and 9-Hexadecanoic acid were tentatively detected in the background well.

There are no municipal drinking water wells within 1 mile of the RDS. The closest municipal wells are about 1.5 miles to the northeast of the site. The closest private wells used for domestic purposes are about 1 mile from the site. There are also over 425 points of diversion within 4 miles of the RDS. The groundwater pathway can not be completely identified until the local groundwater conditions are better delineated.

6.2 Direct Contact

Soil and sediment sample results reveal the presence of organic and inorganic contaminants on site. The background soil sample contained the highest concentration of the majority

of the inorganic concentrations.

The population within 1 mile is approximately 9,500 (see Appendix III). There is a potential for direct contact, because the gate is left open during the day and the site is across the street from the High School property. The direct contact pathway is of minor concern when compared with the relatively small number of long term receptors at the site.

6.3 Surface Water

There is a potential for contaminants migrating off-site through the surface water pathway. The irrigation well on-site has an artesian head during part of the year and flows down a ditch into a ditch along the railroad right of way. However, the amount of water flow is low and changes seasonally. The surface watter pathway is of minor concern due to the small amount of seasonal surface water leaving the site.

6.4 Air

There is a potential for corroding drums to release to the air; however, this is a minor concern compared to the threat of toxic fumes released to the air by fire. There is a High School 2 blocks to the east of the site, students and nearby residents could be affected by the toxic fumes.

7.0 CONCLUSIONS

The main objectives of the Site Inspection performed at the RDS were to: 1. Characterize contaminants on-site by sampling stained soil and drums, 2. determine whether groundwater is being contaminated by chemicals leaking from drums staged on-site, 3. determine the potential for materials to migrate off-site by characterizing and sampling contents of drums and any ponded water or surface water run-off present on or near the site, 4. assess the overall fire and explosion hazard associated with the site using the explosimeter and other monitoring equipment, and 5. assess the overall direct contact threat associated with the site.

1. Soil and drum sample results indicate there are several organic contaminants including pesticides present on the site (see Tables 5 and 6). Groundwater samples indicate arsenic levels above the MCL of 50 ppb in the background well at 113 ppb. Several organic compounds were detected in the downgradient groundwater monitoring wells including Trichloroethene, which was detected in RD-MW-02 at 1800 ppb. Trichloroethene was detected in the surface water sample at 24 ppb. The MCL for Trichloroethene is 5 ppb.

2. There are several organic compounds found in the downgradient wells (see Table I). It is not apparent that the groundwater is being contaminated by chemicals leaking from drums staged on-site. None of the organic compounds identified in the drums sampled by

drums staged on-site. None of the organic compounds identified in the drums sampled by EPA's Technical Assistance Team were identified in the groundwater and surface water samples.

3. It is possible that the contaminants in the groundwater and surface water may migrate off-site. It is not apparent that the drums are the source for the contaminants in the groundwater and surface water. Two municipal wells are located about 1.5 miles northeast of the site and the Bear River Migratory Bird Refuge is located about 2 miles to the west. It appears that the groundwater flow direction is variable. There is a potential for these contaminants to migrate off-site; however, further studies would be necessary to better define the groundwater conditions.

4. There is a potential for the drums to ignite and release toxic fumes into the air. The Box Elder High School is located about 2 blocks east of the site. The owner has attempted to reduce the fire threat at the site by cutting down weeds and removing the "tar pit".

5. The gate to the site is open during business hours. During drilling and sampling as many as 15 people were seen visiting the site. There is a potential for workers and people visiting the site to come in contact with contaminated soils and surface water.

8.0 REFERENCES

Bjorklund, L.J., and McGreevy, L.J. 1974. State of Utah Department of Natural Resources Technical Publication No. 44, Ground-Water Resources of the Lower Bear River Drainage Basin, Box Elder County, Utah.

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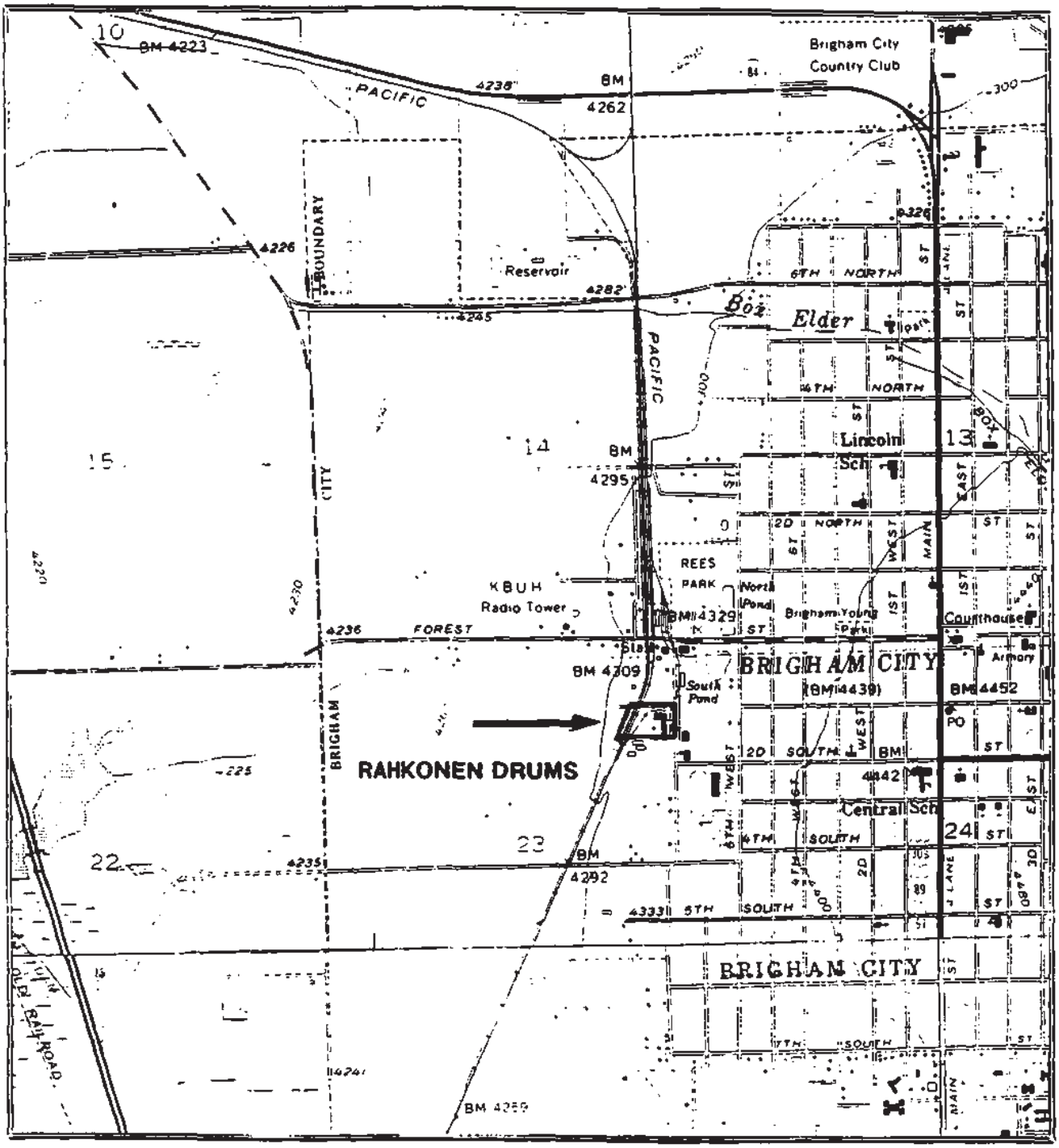
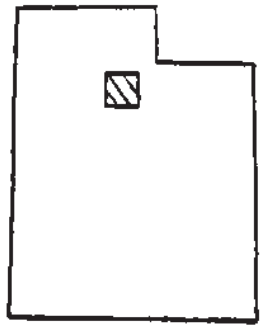
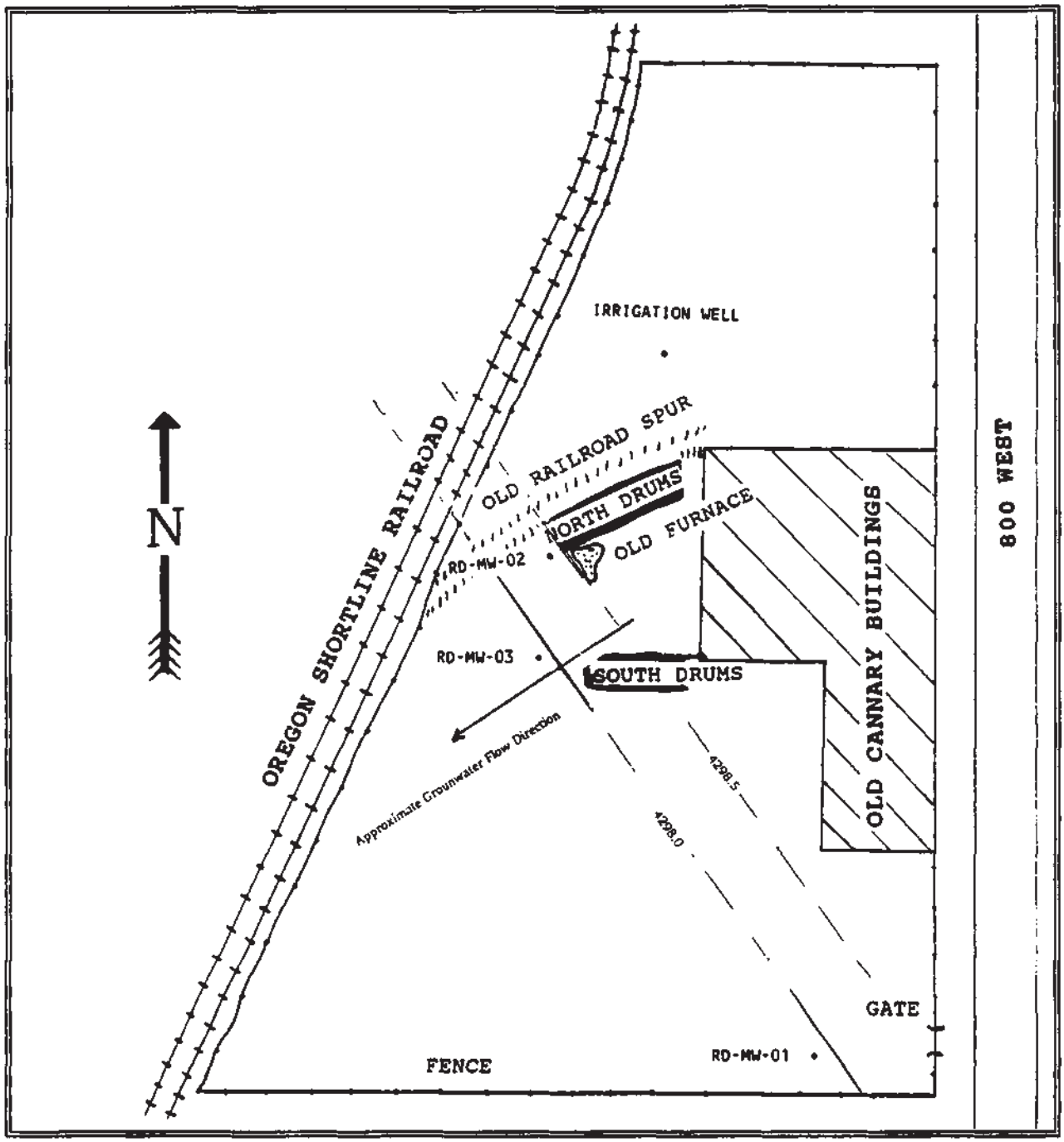


Source: U.S.G.S 7.5 Minute Quadrangle Map



NORTH

UTAH DEPT. OF HEALTH Bureau of Solid and Hazardous Waste		
SITE LOCATION MAP RAHKONEN DRUMS Figure 1		
by SLR	date 2/9/90	SCALE 1:24,000



Water Contour (feet above sea level)

Approximate Grounwater Flow Direction
(Based upon Monitor Well Data 5/21/91)

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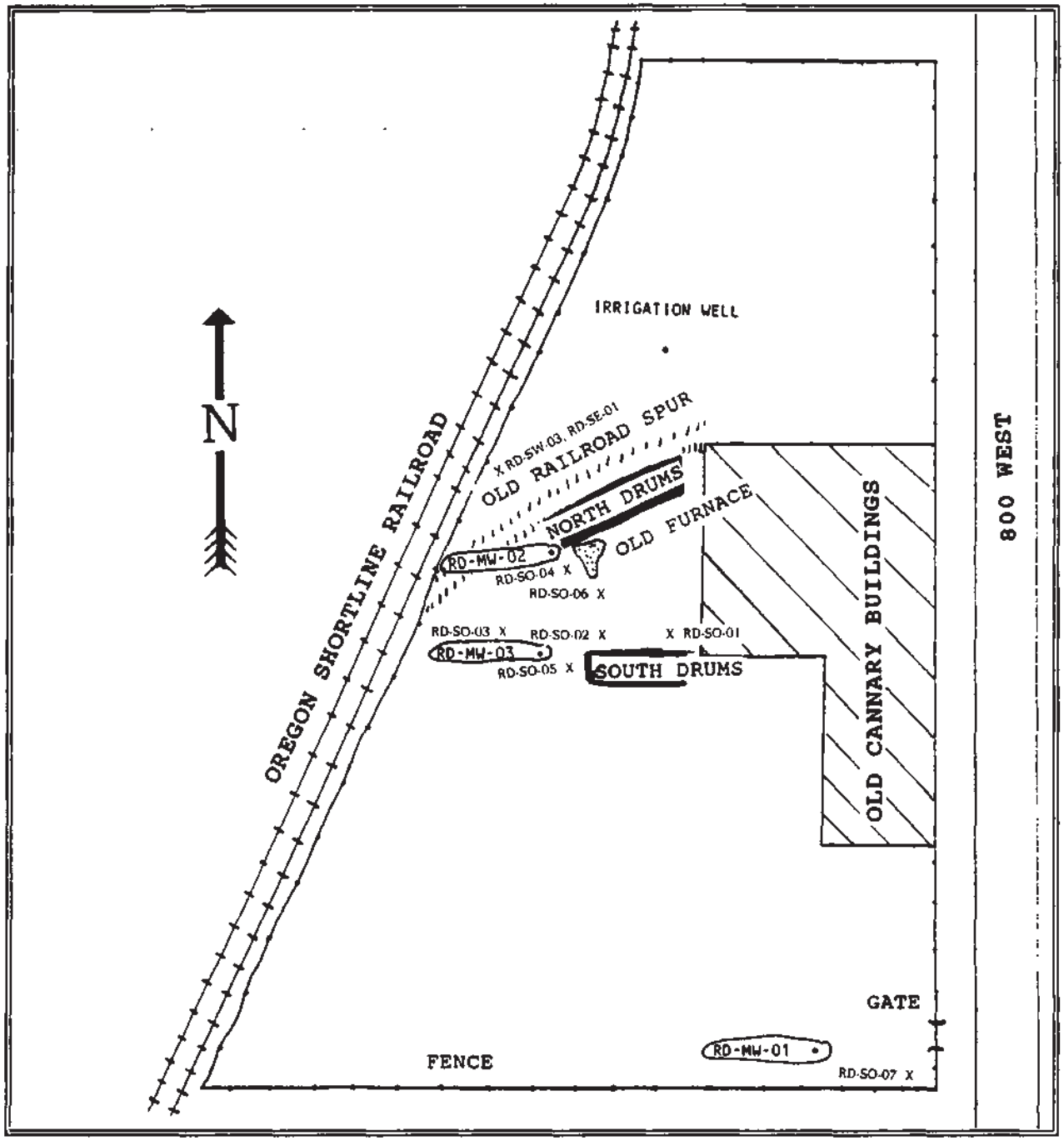
Groundwater Map

Rahkonen Drum Site

Figure 2

By	Date	Scale
TH	4/15/91	Not to Scale



X = Soil, Sediment, or Surface Water Sample Location

• = Groundwater Sample Location

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Sample Location Map

Rahkonen Drum Site

Figure 3

By	Date	Scale
TH	4/15/91	Not to Scale

TABLE 1 - Physical Groundwater Parameters

Well Number	pH	Specific Conductivity (µmhos)	Temperature (°C)	Sediment Content (%)	Groundwater Elevation (feet)
RD-MW-01					4218.30
RD-MW-02					4228.99
RD-MW-03					4229.06
RD-MW-04					4224.08
RD-MW-01	7.97	19440		7	
RD-MW-02	7.35	1635		7	
RD-MW-03	7.51	9345		5	
RD-MW-04	7.47	25750		8	
RD-MW-01	7.10	20900	12.10		4219.46
RD-MW-02	7.00	1783	13.20		4221.13
RD-MW-03	6.80	1040	22.30		4221.14
RD-MW-04	6.80	31100	21.10		4219.31
RD-MW-06	7.30	2640	9.30		4220.91
RD-MW-07	7.30	2780	10.60		4224.34

Sediment Content = Visusal Estimate of Percentage of Sediment Content in Groundwater

Groundwater Elevation in Feet Above Mean Sea Level

TABLE 2

ORGANIC DATA RESULTS FOR GROUNDWATER AND SURFACE WATER SAMPLES

RAHKONEN DRUM SITE

Sample Number	RD-MW-01	RD-MW-02	RD-MW-03	RD-MW-04	RD-SW-01	RD-SW-03
Traffic Number	HH803	HH806	HH804	HH805	HH823	HH808
Sample Location	Background	Downgradient	Downgradient	Downgradient	Field Blank	Downgradient
Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Blank	Surface Water
VOLATILES						
1,2 Dichloroethene (total)		6J	9J	10J		
Trichloroethene		1800J	1500J	1600J		24J
Tetrachloroethene		210J	210J	190J		
SEMIVOLATILES						
bis (2-Ethylhexyl) Phthalate			4J			
PESTICIDES						
Pesticides analyzed, none detected						

J - The associated numerical value is an estimated because:

1. the Quality Control criteria were not met, or
2. the amount detected in the sample is below the contract required detection limit - Organic analysis only

Measured in parts per Billion (ppb)

TABLE 3

	INORGANIC ANALYSES RESULTS FOR GROUNDWATER AND SURFACE WATER					
		Rahkonen Drum Site, Brigham City, Utah				
Sample Number	RD-MW-01	RD-MW-02	RD-MW-03	RD-MW-04	RD-SW-01	RD-SW-03
Traffic Number	MHR800	MHR803	MHR801	MHR802	MHR820	MHR805
Sample Location	Background	Downgradient	Downgradient	Downgradient	Field Blank	Downgradient
Aluminum						143
Arsenic	113	1.6		1.2		10.7
Barium	74.8	105	124	125	1.2	125
Calcium	46200	82200	99200	99600		29100
Copper	5.6					
Iron	138			19.3		542
Lead		1.1				6
Magnesium	19300	23100	24700	24700		14800
Manganese	69	42.8	70.4	71.9		49.3
Potassium	7380	3040	6540	6670		6170
Selenium	1.2					
Silver						5.1
Sodium	102000	18200	24800	26700	56	40500
Vanadium	5.1		5.2			
Zinc	8.1	18.3	7.2	19		4.6

Measured in Parts Per Billion (ppb)

TABLE 4

	INORGAINC ANALYSES FOR SOIL AND SEDIMENT SAMPLES						
		Rahkonen Drum Site, Brigham City, Utah					
Sample Number	RD-SE-01	RD-SO-04	RD-SO-04D	RD-SO-02	RD-SO-02D	RD-SO-01	RD-SO-01D
Traffic Number	MHR804	MHR806	MHR807	MHR808	MHR809	MHR810	MHR811
Sample Location	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient
Alluminum	6570	4300	3110	8240	7980	4920	4410
Antimony				8.2			
Arsenic	9.4	4	2.5	2.1	2.1	2.4	2.3
Barium	155	213	105	179	204	142	112
Beryllium		0.59	0.53	0.61	0.57		0.51
Cadmium		1.4	0.85	1.8		0.98	
Calcium	6480	5200	6550	22500	6950	10200	6340
Chromium	9.6	9	7.4	15	7.6	9.8	12.1
Cobalt	3.9	3.7	2.8	4.6	3.3	3.9	3.1
Copper	39.7	42.6	23.8	25	20.4	47.9	34.8
Iron	11400	8620	6880	10400	8390	8800	6510
Lead	41.8	72	39.8	78.9	55.6	67.8	49.6
Magnesium	2860	2360	2080	2410	2240	2250	1810
Manganese	282	165	107	115	87.3	131	96.2
Mercury		0.13				0.27	
Nickel		10.4	3.4	11.4	5.1	6.8	6.4
Potassium	1830	1120	870	1150	1320	1810	1420
Selenium		0.66	0.41		0.25	0.31	0.29
Sodium	286	473	338	1160	800	163	194
Vanadium	9.6	10.7	7.1	14	11.8	9.1	7.5
Zinc	125	349	155	519	82.3	267	183

Measured in Parts Per Million (ppm)

TABLE 4 (Continued)

INORGAINC ANALYSES FOR SOIL AND SEDIMENT SAMPLES

Rahkonen Drum Site, Brigham City, Utah

Sample Number	RD-SO-06	RD-SO-06D	RD-SO-03	RD-SO-03D	RD-SO-05	RD-SO-05D	RD-SO-07	RD-SO-07D
Traffic Number	MHR812	MHR813	MHR814	MHR815	MHR816	MHR817	MHR818	MHR819
Sample Location	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Background	Background
Alluminum	2950	2830	7030	6320	6500	4950	4260	3960
Antimony					10			7.9
Arsenic	1.4	1.1	2.3	2.5	2.5	2.3	4	2.2
Barium	30.2	38.2	205	158	246	130	86.8	61.6
Beryllium			0.59	0.57	0.57	0.56		
Cadmium					0.92		0.9	
Calcium	3490	5210	9240	7180	10700	8460	14400	29300
Chromium	5.4	5.5	9.9	8.1	7.3	7.2	68.2	9.1
Cobalt	1.7	2.3	3.3	3.5	3.7	3.5	3.5	3.5
Copper	11	9.5	37.2	33.3	37.3	17.4	27.2	17.1
Iron	4280	4290	8850	8680	8930	11100	8280	8110
Lead	31.8	23.3	65.1	48.1	28.4	20.5	221	95.4
Magnesium	1900	1700	2390	2010	2800	2010	5620	5090
Manganese	54.8	56	130	110	131	88.4	309	262
Mercury								0.12
Nickel	3.9	5.1	8.8	6.3	9.9	8.5	9.5	7.2
Potassium	861	761	1890	1960	1310	1240	1210	857
Selenium			0.34	0.4	0.36	0.33		
Sodium	30.1	23.5	358	296	709	304	56.1	42.7
Vanadium	5	6.1	11.5	12.3	9.9	9.6	9.1	7.8
Zinc	192	132	175	146	146	78.1	218	147

Measured in Parts Per Million (ppm)

TABLE 5

ORGANIC ANALYSES OF SOIL AND SEDIMENT SAMPLES (SEMIVOLATILES)							
			Rahkonen Drum Site, Brigham City, Utah				
Sample Number	RD-SE-01	RD-SO-04	RD-SO-04D	RD-SO-02	RD-SO-02D	RD-SO-01	RD-SO-01D
Traffic Number	HH807	HH809	HH810	HH811	HH812	HH813	HH814
Sample Location	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient
SEMIVOLITILE							
4-Methylphenol	590J					280J	2000J
bis (2-Ethylhexyl) phtalat	330J			140J		2200J	
Naphthalene		1100J	1400J				81J
2-Methylnapthalene		1400J	5300J				370J
Dibenzofuran		520J	900J				
Phenathrene		1500J	2300J				370J
Fluoranthene		650J	560J				
Pyrene		700J	4100J				97J
Chrysene		800J			91J	260J	
Benzo (b) Fluoranthene		810J	2300J	120J	110J		84J
Benzo (a) Pyrene		280J	3700J		120J		
Benzo (g,h,i) Perylene		960J	15000J		190J		83J
Di-n-Octyl Phtalate					170J		
Benzo (k) Fluoranthene					88J		76J
Benzoic Acid						310J	
Di-n-Butylphtalate						250J	
Phenol							83J
2-Methylphenol							270J
2,4-Dimethylphenol							1100J
N-Nitrosodiphenylamine (1)							1300J
Benzo (a) Anthracene							
J - The associated numerical value is an estimated because:							
1. the Quality Control criteria were not met, or							
2. the amount detected in the sample is below the contract required detection limit - Organic analysis only							

Measured in Parts Per Billion (PPB)

TABLE 5 (Continued)

	ORGANIC ANALYSES FOR SOIL AND SEDIMENT (SEMIVOLATILE)							
		Rahkonen Drum Site, Brigham City, Utah						
Sample Number	RD-SO-06	RD-SO-06D	RD-SO-03	RD-SO-03D	RD-SO-05	RD-SO-05D	RD-SO-07	RD-SO-07D
Traffic Number	HH815	HH816	HH817	HH818	HH819	HH820	HH821	HH822
Sample Location	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Background	Background
SEMIVOLITILE								
4-Methylphenol								
bis (2-Ethylhexyl) phtalate	160J					330J		
Naphthalene			720J	92J	150J			
2-Methylnapthalene			810J	130J	410J			
Dibenzofuran			170J		87J			
Phenathrene			330J	81J	250J	100J		
Fluoranthene			200J		130J	190J		
Pyrene			580J		220J	180J		
Chrysene			1500		280J	140J		
Benzo (b) Fluoranthene			500J			250J		
Benzo (a) Pyrene						130J		
Benzo (g,h,i) Perylene					1700J	330J		
Di-n-Octyl Phtalate		130J						
Benzo (k) Fluoranthene								
Benzoic Acid								
Di-n-Butylphtalate								
Phenol								
2-Methylphenol								
2,4-Dimethylphenol								
N-Nitrosodiphenylamine (1)								
Benzo (a) Anthracene						140J		

J - The associated numerical value is an estimated because:

1. the Quality Control criteria were not met, or
2. the amount detected in the sample is below the contract required detection limit - Organic analysis only

Measured in Parts Per Billion (PPB)

TABLE 6

ORGANIC ANALYSES FOR SOIL AND SEDIMENT (PESTICIDES AND VOLATILES)							
Rahkonen Drum, Brigham City, Utah							
Sample Number	RD-SE-01	RD-SO-04	RD-SO-04D	RD-SO-02	RD-SO-02D	RD-SO-01	RD-SO-01D
Traffic Number	HH807	HH809	HH810	HH811	HH812	HH813	HH814
Sample Location	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient
PESTICIDES							
4,4'-DDE	7.3J	160J		160J	71J	210J	410J
4,4'-DDT	11J	580J	49J	330J	100J	850J	1300J
Aldrin		34J					
Methoxychlor		120J			180J		
Endosulfan II			45J				
4,4'-DDD			94J				
Dieldrin				8.2J		21000J	250J
alpha-Chlordane				4.2J	2.6J		10J
gamma-Chlordane				4.8J			11J
Endrin						320J	
Endosulfan I							5.9J
gamma-BHC (Lindane)							
Heptachlor epoxide							
VOLATILES							
Acetone	43J		29J	19J			

J - The associated numerical value is an estimated because:

1. the Quality Control criteria were not met, or
2. the amount detected in the sample is below the contract required detection limit - Organic analysis only

Measured in Parts Per Billion (PPB)

TABLE 6 (Continued)

ORGANIC ANALYSES OF SOILS AND SEDIMENT (PESTICIDES AND VOLATILES)								
Rahkonen Drum, Brigham City, Utah								
Sample Number	RD-SO-06	RD-SO-06D	RD-SO-03	RD-SO-03D	RD-SO-05	RD-SO-05D	RD-SO-07	RD-SO-07D
Traffic Number	HH815	HH816	HH817	HH818	HH819	HH820	HH821	HH822
Sample Location	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Background	Background
PESTICIDES								
4,4'-DDE	150J		470J	260J	31J	51J	210J	110J
4,4'-DDT	1400J	510J	900J	800J	90J	51J	760J	1100J
Aldrin			7.7J					
Methoxychlor								
Endosulfan II					20J			
4,4'-DDD		21J	120J	160J	40J		61J	31J
Dieldrin		3.1J		13J		25J	48J	
alpha-Chlordane	4.4J		43J	33J				
gamma-Chlordane	5.3J		33J	26J				2.7J
Endrin								
Endosulfan I								
gamma-BHC (Lindane)	2.3J							
Heptachlor epoxide			8.6J		3.5J			
VOLATILES								
Acetone	15J		17J			24J		

J - The associated numerical value is an estimated because:

1. the Quality Control criteria were not met, or
2. the amount detected in the sample is below the contract required detection limit - Organic analysis only

Measured in Parts Per Billion (PPB)

APPENDIX I - EPA Site Inspection Form

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

I. IDENTIFICATION NO.
UTD98154598

PART 1 - SITE LOCATION AND INSPECTION INFORMATION

II. SITE NAME LOCATION

01 Site Name (Legal, common or descriptive name of site)
Rahkonen Drum Site

02 Street, route no. or specific location identifier
112 South 800 West

03 City
Brigham City

04 State UT 05 Zip Code 84302 06 County Box Elder

07 County Code 003 08 Congress District 1

09 Coordinates (d,m,s)
Latitude 41-30-34.7
Longitude 112-01-33.9

10 Type of ownership (Check one)
X Private
Federal
State
Unknown
County
Municipal
Other:

III. INSPECTION INFORMATION

01 Date Of Inspection
03/27/91

02 Site Status
X Active
Inactive

03 Years Of Operation
Beginning Year
Ending Year
Unknown X

04 Agency Performing Inspection (Check all that apply)
EPA
EPA Contractor:
Municipal
Municipal Contractor:
X State
State Contractor:
Other:

05 Chief Inspector	06 Title	07 Organization	08 Telephone No.
Terry Hawkins	EH Scientist	UDERR	801-538-6338

09 Other Inspectors	10 Title	11 Organization	12 Telephone No.
James Martin	EH Scientist	UDERR	801-538-6338
Harold Sandbeck	EH Scientist	UDERR	801-538-6338

13 Site Representatives Interviewed	14 Title	15 Telephone No.
A. Arnold Thompson	A. Owner	A. 801-723-7894
B. John Peterson	B. Owner	B. 801-723-5136
C. John Rahkonen	C. Operator	C. 801-731-1120

16 Address
A. 753 Sunset Dr., Brighom City, UT. 84302
B. 889 West 800 South, Brigham City, UT. 84302
C. 2766 North 1050 East, Ogden, UT. 84404

17 Access Gained By (Check one)
x PERMISSION
WARRANT

18 Time Of Inspection
All Day

19 Weather Conditions
sunny, 5 mph wind from NE

IV. INFORMATION AVAILABLE FROM

01 Contact	02 Agency/Organization	03 Telephone
Terry Hawkins	UDERR	804-538-6338

04 Person Responsible For Site Inspection Form	05 Agency/Organization
Terry Hawkins	UDERR

06 Telephone No. 801-538-6338
07 Date 03/27/91

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 Physical States (Check all that apply)

- x Solid
- x Powder, Fines
- Other (Specify)
- Slurry
- x Liquid
- Gas

02 Waste Quantity at Site (Measures of waste quantities must be independent)

Unknown	Tons
Unknown	Cubic Yards
900	Number of Drums

03 Waste Characteristics (Check all that apply)

x Toxic	x Persistent	x Flammable	Explosive	Not Applicable
x Corrosive	x Soluble	x Ignitable	Reactive	
Radioactive	Infectious	Highly Volatile	Incompatible	

III. WASTE TYPE

Category	Substance Name	01 Gross Amount	02 Unit of Measure	03 Comments
SLU	Sludge	Unknown	Unknown	It is unkown what
OLW	Oily Waste	Unknown	Unknown	wastes were disposed
SOL	Solvents	Unknown	Unknown	at the site.
PSD	Pesticides	Unknown	Unknown	
OCC	Other Organic Chem	Unknown	Unknown	
IOC	Inorganic Chem	Unknown	Unknown	
ACD	Acids	Unknown	Unknown	
BAS	Bases	Unknown	Unknown	
MES	Heavy Metals	Unknown	Unknown	

IV. HAZARDOUS SUBSTANCES (See appendix for most frequently cited CAS numbers)

01 Category	02 Substance Name	03 CAS Number	04 Storage/ Disposal Method	05 Concen- tration	06 Measure of Concen- tration
	see next page				

V. FEEDSTOCKS (See appendix for CAS numbers)

Category	01 Feedstock Name	02 CAS #	Category	01 Feedstock Name	02 CAS #
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (CITE specific references, e.f., state files, sample analysis, reports)

01 Analytical Results Report, Rahkonen Drum Site, August 1991.
02 Utah Division of Environmental Response and Remediation Files.
03
04

IV. HAZARDOUS SUBSTANCES					
1	2	3	4	5	6
Category	Substance Name	CAS Number	Storage/Disposal Method	Concentration	Measure of Concentration
MES	Arsenic	7440-38-2	in groundwater	113	ppm
MES	Barium	7440-38-3	in groundwater	125	ppm
MES	Iron	7439-89-6	in surface water	542	ppm
SOL	1,2 Dichloroethene (total)	540-59-0	in groundwater	10	ppb
SOL	Trichloroethene	79-01-6	in ground/surface water	1800	ppb
SOL	Tetrachloroethene	127-18-4	in groundwater	210	ppb
PSD	4,4'-DDE	72-55-9	in soil/sediment	470/7.3	ppb
PSD	4,4'-DDT	50-29-3	in soil/sediment	1400/11	ppb
PSD	Aldrin	309-00-2	in soil	34	ppb
PSD	Methyloxchlor	72-43-5	in soil	180	ppb
PSD	Endosulfan II	33213-65-9	in soil	45	ppb
PSD	4,4'-DDD	72-54-8	in soil	160	ppb
PSD	Dieldrin	60-57-1	in soil	21000	ppb
PSD	alpha-Chlorodane	5103-71-9	in soil	43	ppb
PSD	gamma-Chlorodane	5103-74-2	in soil	33	ppb
PSD	Endrin	72-20-8	in soil	320	ppb
PSD	Endosulfan I	959-98-8	in soil	5.9	ppb
PSD	gamma-BHC (Lindane)	58-89-9	in soil	2.3	ppb
PSD	Heptachlor epoxide	1024-57-3	in soil	8.6	ppb
OCC	bis (2-Ethylhexyl) Phthalate	117-81-7	in groundwater/soil	4/2200	ppb
OCC	4-Methylphenol	106-44-5	in soil	2000	ppb
OCC	Naphtalene	91-20-3	in soil	1400	ppb
OCC	2-Methlynaphtalene	91-57-6	in soil	5300	ppb
OCC	Dibenzofuran	132-64-9	in soil	900	ppb
OCC	Phenathrene	85-01-8	in soil	2300	ppb
OCC	Fluoranthene	206-44-0	in soil	650	ppb
OCC	Pyrene	129-00-0	in soil	4100	ppb
OCC	Chrysene	218-01-9	in soil	800	ppb
OCC	Benzo (b) Fluoranthene	205-99-2	in soil	2300	ppb
OCC	Benzo (a) Pyrene	50-32-8	in soil	3700	ppb
OCC	Benzo (g,h,i) Perylene	191-24-2	in soil	15000	ppb
OCC	Di-n-Octyl Phtalate	117-84-0	in soil	170	ppb
OCC	Benzo (k) Fuoranthene	207-08-9	in soil	88	ppb
OCC	Benzoic Acid	65-85-0	in soil	310	ppb
OCC	Di-n-Butylphtalate	84-74-2	in soil	250	ppb
OCC	Phenol	108-95-2	in soil	83	ppb
OCC	2-Methyphenol	95-48-7	in soil	270	ppb
OCC	2,4-Dimethylphenol	105-67-9	in soil	1100	ppb
OCC	N-Nitrosodiphenylamine (1)	86-30-6	in soil	140	ppb

II. HAZARDOUS CONDITIONS AND INCIDENTS

A. 01 GROUNDWATER CONTAMINATION 02 Observed Date 03/27/91 Potential
03 Population Potentially Affected 18,000 Alleged
04 Narrative Description:
The data results for the 3/27/91 sampling indicates a presence of several inorganic and organic compounds to the groundwater. The background well has arsenic above the MCL. Downgradient wells have Barium above the MCL.

B. 01 SURFACE WATER CONTAMINATION 02 Observed Date 03/27/91 Potential
03 Population Potentially Affected 100 Alleged
04 Narrative Description:
Trichloroethene was detected in the groundwater at 24 ppb. Barium was detected in the surface water above the MCL of 100 ppb. Iron was detected above the reccomended concentration limit of 300 ppb at 542 ppb.

C. 01 CONTAMINATION OF AIR 02 Observed Date __/__/__ x Potential
03 Population Potentially Affected 18,000 Alleged
04 Narrative Description:
There exists a potential for drums to release toxic fumes, if drums caught fire, the site is across the street from a high school.

D. 01 FIRE/EXPLOSIVE CONDITIONS 02 Observed Date __/__/__ Potential
03 Population Potentially Affected 18,000 Alleged
04 Narrative Description:
The "tar pit" (alleged spilled fuel) caught on fire.

E. 01 DIRECT CONTACT 02 Observed Date __/__/__ x Potential
03 Population Potentially Affected 10 Alleged
04 Narrative Description:
The gate to the site is open during business hours. The site is across the street from the high school.

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

F. 01 CONTAMINATION OF SOIL — 02 Observed Date 03/27/91 — Potential / Alleged
03 Area Potentially Affected 10
04 Narrative Description:
The data resulo 3/27/91 Sampling indicates that several organic compounds including pesticides and inorganic compounds are present in the soil.

G. 01 DRINKING WATER CONTAMINATION — 02 Observed Date __/__/__ — x Potential / Alleged
03 Population Potentially Affected 18,000
04 Narrative Description:
There may be a connection between the upper and lower portions of the aquifer. Contaminants might enter the lower portion of the aquifer, which is used for drinking water.

H. 01 WORKER EXPOSURE/INJURY — 02 Observed Date __/__/__ — x Potential / Alleged
03 Workers Potentially Affected 10
04 Narrative Description:
No recorded history.

I. 01 POPULATION EXPOSURE/INJURY — 02 Observed Date __/__/__ — x Potential / Alleged
03 Population Potentially Affected 15
04 Narrative Description:
No recorded history.

J. 01 DAMAGE TO FLORA — 02 Observed Date __/__/__ — Potential / Alleged
03 Narrative Description:
No recorded history.

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

K. 01 DAMAGE TO FAUNA 02 Observed Date __/__/__ x Potential Alleged
03 Narrative Description:
Wildlife, including deer, have been seen on site. There are wet lands within 2 miles to the west of the site.

L. 01 CONTAMINATION OF FOOD CHAIN 02 Observed Date __/__/__ x Potential Alleged
03 Narrative Description:
No recorded history. However, the site is near an agriculture area. Corn is grown on the site.

M. 01 UNSTABLE CONTAINMENT OF WASTES 02 Observed Date 03/27/91 Potential Alleged
(Soils/Runoff/Standing Liquids/Leaking Drums)
03 Population Potentially Affected
04 Narrative Description:
Many of the 900 drums are leaking.

N. 01 DAMAGE TO OFFSITE PROPERTY 02 Observed Date __/__/__ x Potential Alleged
03 Narrative Description:
There is a potential for contaminants to move off-site through surface and groundwater

O. 01 CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS 02 Observed Date __/__/__
03 Narrative Description: Potential Alleged
No recorded history.

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

P. 01 ILLEGAL/UNAUTHORIZED DUMPING 02 Observed Date __/__/__ Potential
03 Narrative Description: Alleged
No recorded history.

Q. 01 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL OR ALLEGED HAZARDS:
If the drums were to burn, they would release toxic fumes into the air.
The high school is across the street.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 19,200

IV. COMMENTS

The site is at the West side of Brigham City. There is a residential area close to the high school across the street.

V. SOURCES OF INFORMATION (Cite specific references, e.f., state files, sample analysis, reports)

01 Preliminary Assessments, Rahkonen Drum Site
02 Sampling Plan, Rahkonen Drum Site
03 Field Activities Report, Rahkonen Drum Site
04 Utah Dept of Environmental Quality, Div. of Drinking Water Well Records
05

II. PERMIT INFORMATION

01 Type Of Permit Issued	02 Permit No.	03 Date Issues	04 Expira/Date	05 Comments
NPDES		/ /	/ /	None.
UIC		/ /	/ /	
AIR		/ /	/ /	
RCRA		/ /	/ /	
RCRA INTERIM STATUS		/ /	/ /	
SPCC PLAN		/ /	/ /	
STATE		/ /	/ /	
LOCAL		/ /	/ /	
OTHER		/ /	/ /	
NONE		/ /	/ /	

III. SITE DESCRIPTIONS

01 Storage/Disposal (Ckeck all that apply)	02 Amount	03 Unit Of Measure	04 Treatment (Check all that apply)
Surface Impoundment			Incineration
Pile			Underground Injection
Drums, Above Ground			Chemical/Physical
Tank, Above Ground			Biological
Tank, Below Ground			Waste Oil Processing
Landfill			Solvent Recovery
Landfarm			Other Recycling/Rcvry
Open Dump			Other
Other			

05 Buildings On Site: 2 06 Area Of Site: 8(Acres)
07 Comments:

IV. CONTAINMENT

01 Containment Of Wastes (Check one)
Adequate, Secure — X Inadequate, Poor
Moderate — Insecure, Unsound, Dangerous

02 Description Of Drums, Diking, Liners, Barriers, Etc.:
Many of the drums are leaking. Drums are stored outside.

V. ACCESSIBILITY

01 Waste Easily Accessible: X Yes No
02 Comments:
The gate is open during business hours.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

01 Sampling Plan, Rahkonen Drum Site
02 Utah Division of Solid & Hazardous Waste, RCRA files
03
04
05

II. DRINKING WATER SUPPLY

01 Type Of Drinking Supply (Check as applicable)			02 Status			03 Distance To Site
	Surface	Well	Endangered	Affected	Monitored	
Community		X	X			1.50(mi)
Non-Community		X	X			0.00(mi)

III. GROUNDWATER

01 Groundwater Use In Vicinity (Check one)

A. Only Source For Drinking
B. Commercial, Industrial, Irrigation
X C. Not Used, Unusable
D. Drinking (Other sources available)
X E. Commercial, Industrial, Irrigation (No other water sources available)

02 Population Served By Groundwater
03 Distance To Nearest Drinking Water Well 1.50(mi)
04 Depth To Groundwater 12(ft)
05 Direction Of Groundwater Flow NE to SW
06 Depth To Aquifer Concerned 12(ft)
07 Potential Yld Of Aquifer Unknown(gpd)
08 Sole Source Aquifer Yes X No
09 Description Of Wells (Including usage, depth and location relative to population and buildings)
There are 425 points of diversion within 4 miles of the site including eight (8) municipal wells. There are many private wells used for irrigation, stock watering, and domestic uses within four (4) miles of the site.

10 Recharge Area Yes No Comments:Unknown
11 Discharge Area Yes X No Comments:

IV. SURFACE WATER

01 Surface Water Use (Check one)

A. Reservoir, Recreation Drinking Water Source
B. Irrigation, Economically Important Resources
C. Commercial,Industrial
X D. Not Currently Used

02 Affected/Potentially Affected Bodies Of Water

Name:	Affected:	Distance To Site:
North Pond	Unkwn	0.25(mi)
South Pond	Unkwn	0.20(mi)
Unnamed Reservoir	Unkwn	1.50(mi)
Wetlands	Unkwn	2.00(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 Total Population Within (Number of persons):
A. One (1) Mile Of Site: 9,500
B. Two (2) Miles Of Site: 18,000
C. Three (3) Miles Of Site: 19,200
02 Distance To Nearest Population .1(mi)
03 Number Of Buildings Within Two (2) Miles Of Site Unkwn, all w/in Brghm Cty
04 Distance To Nearest Off-Site Building .1(mi)
05 Population Within Vicinity Of Site (Provide narrative description of nature of population within vicinity of site, e.g., rural, village densely populated urban area)
Brigham City and the small town of Perry are located within three (3) miles of the site. Most of the area is used for agriculture and small industries.

VI. ENVIRONMENTAL INFORMATION

01 Permeability Of Unsaturated Zone (Check one)
A. 10^{-6} - 10^{-8} cm/sec
X B. 10^{-4} - 10^{-6} cm/sec
C. 10^{-2} - 10^{-3} cm/sec
D. Greater Than 10^{-3} cm/sec
02 Permeability Of Bedrock (Check one)
A. Impermeable Less than 10^{-6} cm/sec
B. Relatively Impermeable 10^{-4} - 10^{-6} cm/sec
C. Relatively Permeable 10^{-2} - 10^{-4} cm/sec
D. Very Permeable Greater than 10^{-2} cm/sec
03 Depth To Bedrock up to 8000(ft)
04 Depth Of Contaminated Soil Zone (ft)
05 Soil pH
06 Net Precipation 19(in)
07 One Year 24 Hour Rainfall 0.00(in)
08 Slope:
A. Site slope 4(%)
B. Direction Of Site Slope Northwest
C. Terrain Average Slope (%)
09 Flood Potential Site Is In 100-5 Year Flood Plain
10 Yes X No Site Is On Barrier Island, Coastal High Hazard Area, Riverine Floodway
11 Distance To Wetlands (5 Acre minimum)
A. Estuarine 2.00(mi)
B. Other 0.00(mi)
12 Distance To Critical Habitat (Of endangered species)
A. 2.00(mi)
B. Endangered Species: Bald Eagle/Peregrine
13 Land Use In Vicinity Distance To:
A. Residential Areas: Commercial/Industrial 0.10(mi)
B. National/State Parks, Forests, Or Wildlife Reserves 2.50(mi)
C. Agricultural Lands: Prime Agricultural Land 0.00(mi)
D. Agricultural Lands: Agricultural Land 0.10(mi)
14 Description Of Site In Relation To Surrounding Topography:
The site is on the Western side of Brigham City. Agriculture and the bird refuge is to the West. The national forest is about 2.5 miles to the East in the Wasatch Mountains.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

01 Sampling Plan, Rahkonen Drum Site
02 Field Activities Report, Rahkonen Drum Site
03 Box Elder County Clerk
04 Bear River Migratory Bird Refuge
05

II. SAMPLES TAKEN

	01 Number Of Samples Taken	02 Samples Sent To	03 Estimated Date Results Available
Groundwater	3	Organics sent to Weyerhaeser	/ /
Surface Water	1	Analytical, Washington	/ /
Waste		Inorganics sent to Data Chem.	/ /
Air			/ /
Runoff			/ /
Spill			/ /
Soil	14		/ /
Vegetation			/ /
Other	1	(Other = Sediment	/ /

III. FIELD MEASUREMENTS TAKEN

01 Type	02 Comments
Organic Vapor Hnu & OVA	Drums were monitored with OUA during drum sampling, readings of background to >1000 ppm. Well head space reading with Hnu were background levels.

IV. PHOTOGRAPHS AND MAPS

01 Type: Ground Aerial

02 In Custody Of (Name of organization or individual):

03 Maps: Yes No

04 Location Of Maps:

V. OTHER FIELD DATA COLLECTED (Provide Narrative Description)

The TAT team took product samples of drums.

VI. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 Sampling Plan, Rahkonen Drum Site
02 Analytical Results Report, Rahkonen Drum Site
03
04
05

II. CURRENT OWNER(S) | **PARENT COMPANY (If Applicable)**

01 Name: Arnold Thompson	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#): 753 Sunset Dr.		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City: Brigham City	06 State: UT	12 City:	13 State:
07 Zip Code: 84302		14 Zip Code:	
01 Name: John Peterson	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#): 889 West 800 South		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City: Brigham City	06 State: UT	12 City:	13 State:
07 Zip Code: 84302		14 Zip Code:	
01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	

III. PREVIOUS OWNERS
List Most Recent First

REALTY OWNER(S)
If Applicable, List Most Recent First

01 Name: Smith's Food	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	
01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	

IV. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 Utah Division of Environmental Response & Remediation
02
03
04
05

II. CURRENT OPERATOR (Provide If Different From Owner) | **OPERATOR'S PARENT COMPANY (If Applicable)**

01 Name: John Rahkonen	02 D&B Number	10 Name	11 D&B Number
03 Street Address (P.O.B. or RFD#): 2766 North 1050 East		12 Sreet Address (P.O.B. or RFD#)	
04 SIC Code:		13 SIC Code:	
05 City: Ogden	06 State: UT	14 City:	15 State:
07 Zip Code: 84404		16 Zip Code:	
08 Years Of Operation			
09 Name Of Owner: Arnold Thompson/JPeterson			

III. PREVIOUS OPERATOR(S) (List Most Recent First; Provide Only If Different From Owner) | **PREVIOUS OPERATOR'S PARENT COMPANIES (If Applicable)**

01 Name	02 D&B Number	10 Name	11 D&B Number
03 Street Address (P.O.B. or RFD#)		12 Sreet Address (P.O.B. or RFD#)	
04 SIC Code:		13 SIC Code:	
05 City:	06 State:	14 City:	15 State:
07 Zip Code:		16 Zip Code:	
08 Years Of Operation			
09 Name Of Owner During This Period			
01 Name	02 D&B Number	10 Name	11 D&B Number
03 Street Address (P.O.B. or RFD#)		12 Sreet Address (P.O.B. or RFD#)	
04 SIC Code:		13 SIC Code:	
05 City:	06 State:	14 City:	15 State:
07 Zip Code:		16 Zip Code:	
08 Years Of Operation			
09 Name Of Owner During This Period			

IV. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01
02
03
04
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II. ON SITE GENERATOR

01 Name	02 D&B Number
03 Street Address (P.O.B. or RFD#)	
04 SIC Code:	
05 City:	06 State:
07 Zip Code:	

III. OFF-SITE GENERATOR(S)

01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	
01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	

IV. TRANSPORTER(S)

01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	
01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	

IV. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01
02
03
04
05

II. PAST RESPONSE ACTIVITIES

A. 01 Water Supply Closed 02 Date __/__/__ 03 Agency:
04 Description:

B. 01 Temporary H2O Supply Provided 02 Date __/__/__ 03 Agency:
04 Desciption:

C. 01 Permanent H2O Supply Provided 02 Date __/__/__ 03 Agency:
04 Description:

D. 01 Spilled Material Removed 02 Date __/__/__ 03 Agency:
04 Desciption:

E. 01 Contaminated Soil Removed 02 Date __/__/__ 03 Agency: Owner
04 Description:
"Tar Pit" was removed and taken to the county dump.

F. 01 Waste Repackaged 02 Date __/__/__ 03 Agency:
04 Desciption:

G. 01 Waste Disposed Elsewhere 02 Date __/__/__ 03 Agency:
04 Description:

H. 01 On Site Burial 02 Date __/__/__ 03 Agency:
04 Desciption:

I. 01 In Situ Chemical Treatment 02 Date __/__/__ 03 Agency:
04 Desciption:

J. 01 In Situ Biological Treatment 02 Date __/__/__ 03 Agency:
04 Description:

K. 01 Encapsulation 02 Date __/__/__ 03 Agency:
04 Desciption:

II. PAST RESPONSE ACTIVITIES (Continued)

L. 01 Emergency Waste Treatment 02 Date __/__/__ 03 Agency:
04 Description:

M. 01 Cutoff Walls 02 Date __/__/__ 03 Agency:
04 Desciption:

N. 01 Emergency Diking/Surface Water Diversion 02 Date __/__/__ 03 Agency:
04 Description:

O. 01 Cutoff Trenches/Sump 02 Date __/__/__ 03 Agency:
04 Desciption:

P. 01 Subsurface Cutoff Wall 02 Date __/__/__ 03 Agency:
04 Description:

Q. 01 Barrier Walls Constructed 02 Date __/__/__ 03 Agency:
04 Desciption:

R. 01 Capping/Covering 02 Date __/__/__ 03 Agency:
04 Description:

S. 01 Bulk Tankage Repaired 02 Date __/__/__ 03 Agency:
04 Desciption:

T. 01 Grout Curtain Constructed 02 Date __/__/__ 03 Agency:
04 Desciption:

U. 01 Bottom Sealed 02 Date __/__/__ 03 Agency:
04 Description:

V. 01 Gas Control 02 Date __/__/__ 03 Agency:
04 Desciption:

II. PAST RESPONSE ACTIVITIES (Continued)

W. 01 Fire Control 02 Date __/__/__ 03 Agency: Owner
04 Description:
Weeds and grass were disked under, near the drums.

X. 01 Leachate Treatment 02 Date __/__/__ 03 Agency:
04 Desciption:

Y. 01 Area Evacuated 02 Date __/__/__ 03 Agency:
04 Description:

Z. 01 Access To Site Restricted 02 Date __/__/__ 03 Agency:
04 Desciption:

1. 01 Population Relocated 02 Date __/__/__ 03 Agency:
04 Description:

2. 01 Other Remedial Activities 02 Date __/__/__ 03 Agency:
04 Desciption:

III. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01
02
03
04
05

II. ENFORCEMENT INFORMATION

01 Past Regulatory/Enforcement Action	Yes	No

02 Description Of Federal, State, Local Regulatoy/Enforcement Action:
No recorded history.

III. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 Division of Environmental Response & Remediation Files
02 Division of Solid & Hazardous Waste Files
03
04
05

TARGET SHEET

EPA REGION VIII

SUPERFUND DOCUMENT MANAGEMENT SYSTEM

DOCUMENT NUMBER: 422535

SITE NAME: RAHKONEN DRUMS

DOCUMENT DATE: 08/22/1991

DOCUMENT NOT SCANNED

Due to one of the following reasons:

- ☐ PHOTOGRAPHS
- ☐ 3-DIMENSIONAL
- ☐ OVERSIZED
- ☐ AUDIO/VISUAL
- ☐ PERMANENTLY BOUND DOCUMENTS
- ☐ POOR LEGIBILITY
- ☐ OTHER
- ☐ NOT AVAILABLE
- ☑ TYPES OF DOCUMENTS NOT TO BE SCANNED
  (Data Packages, Data Validation, Sampling Data, CBI, Chain of Custody)

DOCUMENT DESCRIPTION:

APPENDIX II QUALITY ASSURANCE REVIEW

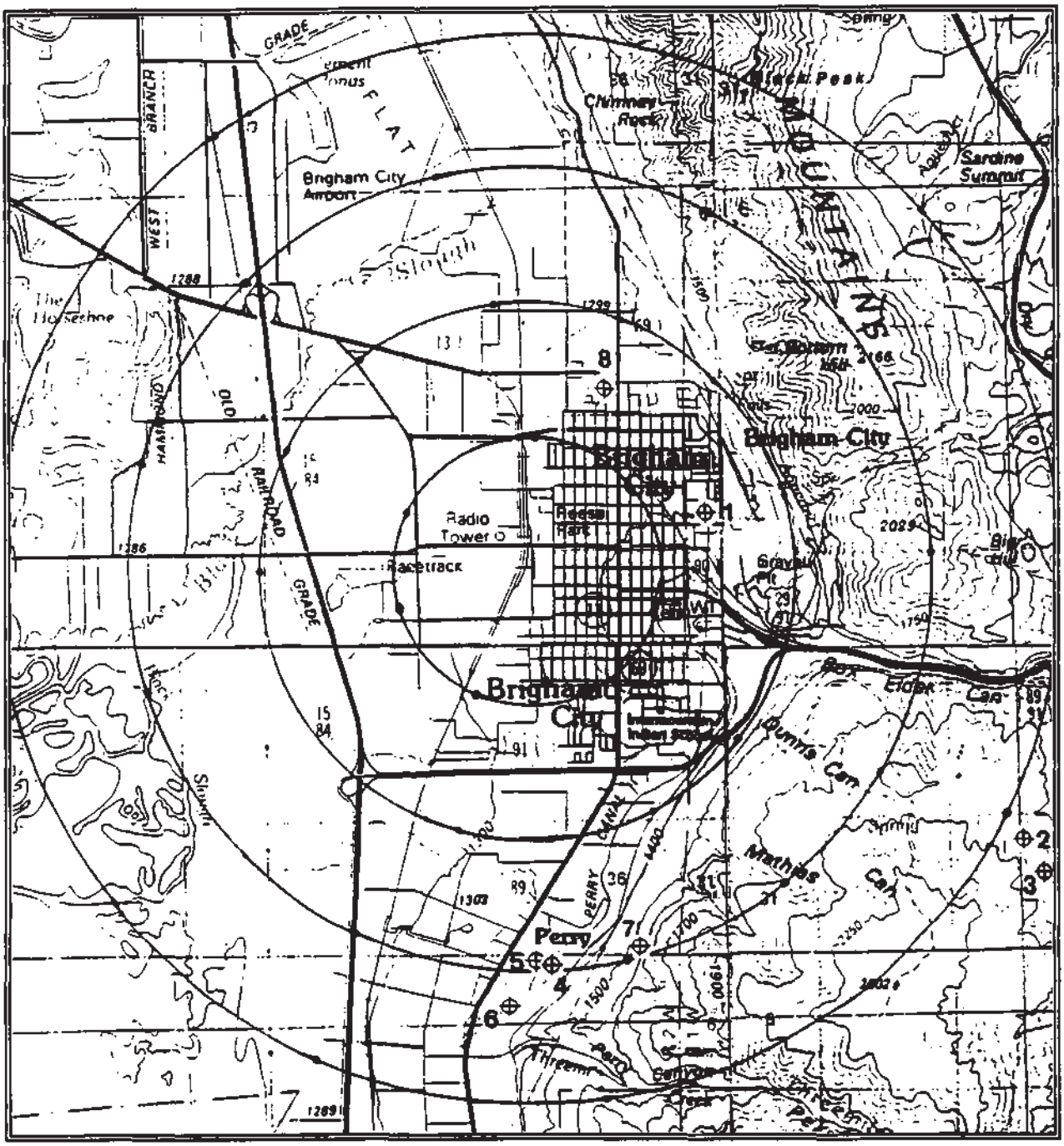
Contact the Superfund Records Center to view available document.
(303) 312-6473

APPENDIX III - Population Density Information

POPULATION TABLE

Community	1 - Mile	2 - Miles	3 - Miles	4 - Miles
Brigham City (18,000 total)	9,500 53%	18,000 100%	18,000 100%	18,000 100%
Perry (1,200 total)	- 0%	- 0%	1,200 100%	1,200 100%
TOTAL	9,500	18,000	19,200	19,200

Note: Information was generated from the population of the communities quoted from Box Elder County Clerk and the 4-Mile Radius of Influence Map



Source: USGS 30 X 60 Map

NORTH

⊕ = Drinking Water Source

DEQ		
BUREAU OF ENVIRONMENTAL RESPONSE AND REMEDIATION		
4 - Mile Radius Influence Map and Municipal Well Locations Rahkonen Drum Site		
By	Date	Scale
TH	8/12/91	1:77,270